

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

Amtech Systems, LLC,

*Plaintiff,*

v.

Kapsch TrafficCom AG; Kapsch TrafficCom B.V.; Kapsch TrafficCom Holding Corp.; Kapsch TrafficCom Holding II US Corp.; Kapsch TrafficCom Inc.; Kapsch TrafficCom Services USA, Inc.; Kapsch TrafficCom USA, Inc.; Kapsch TrafficCom IVHS, Inc.; and Kapsch TrafficCom Canada, Inc.,

*Defendants.*

**CIV. A. NO. 20-CV-1122**

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

1. Plaintiff Amtech Systems, LLC (“Amtech”) is a global leader in traffic management systems. For more than 80 years, it has specialized in developing innovative transportation solutions that support government agencies and private firms around the world. Its business includes the research, development, manufacturing, sale, and marketing of radio frequency identification (“RFID”) products and services, with an emphasis on toll road applications.

2. A pioneer in RFID technology, Amtech developed the industry’s first transportation applications at Los Alamos National Labs in the 1980s. Today, its RFID systems secure access for tolling facilities, airports, hospitals, parking garages, border patrols, trucking fleets, and the rail industry.

3. Amtech is a wholly-owned subsidiary of TransCore, LP (“TransCore”), and its products and solutions are often marketed and sold under the TransCore name.

4. Electronic toll collection (“ETC”) refers to the technology that allows drivers to proceed along an express lane or other toll road and pay their tolls automatically without having

to stop and pay a toll collector. This saves commuters, truck drivers, and others countless hours due to more efficient operations; ensures timely and accurate collections for government agencies and other toll road owners; and citizens also benefit generally from higher government revenue and lower taxes.

5. TransCore designs, installs, and operates ETC systems based on Amtech products and solutions. These include hundreds of express lanes deployed, thousands of electronic toll collection lanes installed, and hundreds of millions of RFID tags sold, capturing billions of toll transactions each year. Amtech also sells its solutions to third party providers of ETC systems. Amtech's solutions enable the most accurate and advanced toll collection in the marketplace.

6. Amtech has spent hundreds of millions of dollars over the years and countless hours of engineering time to develop the technology powering its ETC solutions.

7. Amtech's ETC solutions include a variety of products. Among these are tags, also known as transponders, and readers. Tags can be affixed to an object, such as a vehicle having a tag mounted on its windshield. As the vehicle approaches a toll capture zone, a reader can interrogate or read the tag. Amtech's readers are capable of reading and writing to a variety of transponders using different protocols. Identification received from the tag allows the authority maintaining the toll facility to deduct the amount of the toll from an account associated with the tag. *See, e.g., Exhibit A at 1:18-33.* Amtech's line of tags includes "active" tags, which are battery powered, and "passive" tags, which are not. It also includes both flexible-circuit based tags (commonly known as "sticker" tags) and hardcase transponders. Each tag/transponder is assigned a unique identifier to ensure proper identification and billing of toll road users.

8. By eliminating the need to stop and pay tolls, Amtech's solutions reduce traffic and increase safety. They also provide critical revenue to customers across the United States.

9. The United States Patent and Trademark Office has granted numerous patents on Amtech's ETC technology, including: a) U.S. Patent Nos. 7,518,532 (the "'532 Patent"); b) 7,772,977 (the "'977 Patent"); c) 8,237,565 (the "'565 Patent"); d) 7,548,153 (the "'153 Patent"); e) 8,427,279 (the "'279 Patent"); f) 9,262,656 ("the "'656 Patent"); and g) 10,083,329 (the "'329 Patent") (collectively, the "Asserted Patents," attached as Exhibits A-G respectively). Hereinafter, the first three Asserted Patents—the '532, '977, and '565—are collectively referred to as the "Intermodulation Patents," and the second four Asserted Patents —the '153, '279, '656, and '329—are collectively referred to as the "Reader Sync Patents."

10. Amtech's ETC patents cover, among other things, RFID transponders, readers, and systems that are adapted for storing, retrieving, tracking, and verifying identification data used on toll roads, as well as related methods and processes. By way of example, the Intermodulation Patents include unique intermodulation mitigation techniques that remove interference when multiple readers are placed in close proximity, such as in adjacent lanes of a highway toll capture area. *See, e.g.*, Exhibit A at Abstract. In another example, the Reader Sync Patents include novel synchronization techniques that allow simultaneous operation of closely spaced interrogators. *See, e.g.*, Exhibit D at Abstract.

11. Amtech generates revenue from the marketing and sale of products incorporating its patented technologies. Amtech has marked its products in accordance with 35 U.S.C. § 287 since at least May 2017.

12. Amtech has made significant investments in the United States devoted to researching, developing, manufacturing, marketing, selling, testing, and supporting RFID transponders, readers, and system solutions that employ the technology covered by the Asserted Patents. For example, Amtech has its primary manufacturing facility in Albuquerque, New Mexico, where it employs engineers, administrative staff, and manufacturing personnel. Amtech

also has a state-of-the-art test track facility in Albuquerque, where its products and solutions undergo rigorous testing. This facility employs both test technicians and drivers.

13. Defendant Kapsch TrafficCom AG and its subsidiaries Kapsch TrafficCom B.V.; Kapsch TrafficCom Holding Corp.; Kapsch TrafficCom Holding II US Corp.; Kapsch TrafficCom Inc.; Kapsch TrafficCom Services USA, Inc.; Kapsch TrafficCom USA, Inc.; Kapsch TrafficCom IVHS, Inc.; and Kapsch TrafficCom Canada, Inc. (collectively, “Kapsch” or the “Kapsch Defendants”) are competitors of Amtech and its parent company TransCore.

14. Kapsch often bids against Amtech and TransCore on ETC projects. For example, in recent years, this includes bids on the North Tarrant Express project in Texas, the Louisville-Southern Indiana Ohio River Bridges Project, and toll roads in Puerto Rico.

15. Kapsch’s products and services incorporate Amtech’s patented technology without any license or authorization. This includes the inventions claimed in the Asserted Patents. Kapsch did not develop this technology but is now and has been using it to unlawfully compete against Amtech and TransCore.

16. By using Amtech’s patented technology, Kapsch has been able to unlawfully compete against Amtech without incurring any of the time and expense of developing that technology. Among other things, this free-riding has enabled Kapsch to underbid Amtech and TransCore to win projects that used or required technology to which it did not have the rights, and to reap profits far in excess of what it could lawfully have earned. For example, on information and belief, Kapsch used the technology claimed in the Asserted Patents to win and to perform at least each of the Texas, Louisville-Southern Indiana, and Puerto Rico projects discussed above.

17. The ETC market is highly competitive and ETC projects are typically long-term. In many cases, one bidder will be awarded a contract not only for the sale of tags and readers,

but also for the design, installation, operation, and maintenance of the entire ETC solution. Among other things, Kapsch's use of Amtech's patented technology allowed it to unjustly win bids at Amtech's expense. As a result, Kapsch earned far more than it would have, not only on the unlawful sales and use of tags and readers, but also on design, installation, operation, and maintenance fees, in some cases stretching on for many years, as these additional services were included in the bid as a bundle with the tags and readers. The underlying technology—including the tags and readers—enables the overall system to perform; thus, it was Kapsch's infringement of Amtech's patents that allowed it to unfairly win these bids.

18. Kapsch's illicit gains have come at Amtech's expense, leaving Amtech no choice but to file this lawsuit to defend its intellectual property rights.

#### **THE PARTIES**

19. Plaintiff Amtech Systems, LLC is a Delaware limited liability company with a principal place of business at 8600 Jefferson Street, NE, Albuquerque, NM 87113-1629.

20. Amtech is also the owner of all right, title, and interest in and to the Asserted Patents.

21. On information and belief, defendant Kapsch TrafficCom AG is an Austrian corporation with a principal place of business at Am Europlatz 2, 1120 Vienna, Austria.

22. On information and belief, defendant Kapsch TrafficCom B.V. is a Netherlands corporation with a principal place of business at Verlengde Poolseweg 14, Breda, Noord-Brabant, 4818 CL, Netherlands.

23. On information and belief, defendant Kapsch TrafficCom Holding Corp. is a Delaware corporation with a principal place of business at 8201 Greensboro Drive, Suite 1002, McLean, VA 22102-3840.

24. On information and belief, defendant Kapsch TrafficCom Holding II US Corp. is also a Delaware corporation with a principal place of business at 8201 Greensboro Drive, Suite 1002, McLean, VA 22102-3840.

25. On information and belief, defendant Kapsch TrafficCom Inc. is also a Delaware corporation with a principal place of business at 8201 Greensboro Drive, Suite 1002, McLean, VA 22102-3840.

26. On information and belief, defendant Kapsch TrafficCom Services USA, Inc. is also a Delaware corporation with a principal place of business at 8201 Greensboro Drive, Suite 1002, McLean, VA 22102-3840.

27. On information and belief, defendant Kapsch TrafficCom USA, Inc. is also a Delaware corporation with a principal place of business at 8201 Greensboro Drive, Suite 1002, McLean, VA 22102-3840.

28. On information and belief, defendant Kapsch TrafficCom IVHS, Inc. is also a Delaware corporation with a principal place of business at 8201 Greensboro Drive, Suite 1002, McLean, VA 22102-3840.

29. On information and belief, defendant Kapsch TrafficCom Canada, Inc. is a Canada corporation with a principal place of business at Ambler Drive, Mississauga, ON L4W 2P1, Canada.

#### **JURISDICTION AND VENUE**

30. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 et seq. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

31. Personal jurisdiction exists over each Kapsch Defendant because, on information and belief, it has sufficient minimum contacts with the forum as a result of business conducted

within the State of Texas and within the Western District of Texas, as described below.

32. Personal jurisdiction also exists specifically over each Kapsch Defendant because, on information and belief, each Kapsch Defendant directly or through subsidiaries or intermediaries, makes, uses, offers for sale, sells, imports, advertises, makes available and/or markets products and services, within the State of Texas and within the Western District of Texas, that infringe the Asserted Patents, as described below.

33. Personal jurisdiction also exists specifically over each Kapsch Defendant because, on information and belief, it directly or through subsidiaries or intermediaries, has purposefully and voluntarily placed one or more infringing products and/or services, as described below, into the stream of commerce with the expectation that they will be purchased and/or used in the State of Texas and in the Western District of Texas. These infringing products and/or services have been, and continue to be, purchased and/or used in the State of Texas and in the Western District of Texas.

34. Venue is proper in this District under 28 U.S.C. § 1400(b) because, on information and belief, each Kapsch Defendant has committed acts of infringement in the Western District of Texas and has a regular and established place of business therein. On information and belief, such acts include, by way of example, infringing acts committed in the course of Kapsch's providing toll and intelligent transportation system products and services for the State Highway 45 Southwest Project in Travis County, Texas and Hays County, Texas. On information and belief, Kapsch also has a regular and established office at 7701 Metropolis Drive, Building 14, Suite 100, Austin, TX 78744-3143.

35. Venue is also proper in this District under 28 U.S.C. § 1391(c)(3) because Kapsch TrafficCom AG, Kapsch TrafficCom B.V., and Kapsch TrafficCom Canada, Inc. are foreign corporations. *See In re HTC Corp.*, 889 F.3d 1349 (Fed. Cir. 2018).

36. In addition, on information and belief, the Kapsch corporate family (i) has at least one office in this District, (ii) has operations in this District, and/or (iii) sells and/or attempts to sell products and services to customers in this District.

### **AMTECH'S PATENTED TECHNOLOGY**

37. The Kapsch Defendants infringe independent claims 6 and 11 and dependent claims 7-10 and 12 of the '532 Patent; at least independent claim 1 and dependent claims 2-3 of the '977 Patent; at least independent claims 1, 4, and 6 and dependent claims 2, 3, 5, and 7 of the '565 Patent; at least independent claim 25 of the '153 Patent; at least independent claims 1, 3, 13, 18, and 25 and dependent claims 4, 5, 14, 17, 19-24, and 26-30 of the '279 Patent; at least independent claim 29 of the '656 Patent; and at least independent claims 1 and 11 and dependent claims 2-5, 7, 9, 10, 12-15, 17, and 19 of the '329 Patent (collectively referred to as the "Asserted Claims").

<b>Asserted Patent</b>	<b>Independent Claims</b>	<b>Dependent Claims</b>
7,518,532	6, 11	7-10, 12
7,772,977	1	2, 3
8,237,565	1, 4, 6	2, 3, 5, 7
7,548,153	25	
8,427,279	1, 3, 13, 18, 25	4, 5, 14, 17, 19-24, 26-30
9,262,656	29	
10,083,329	1, 11	2-5, 7, 9, 10, 12-15, 17, 19

38. The Intermodulation Patents are directed to RFID systems and generally disclose and claim devices, methods, and systems for mitigating downlink interference in transponders by including a frequency-selective filter in the tag. The technology claimed in the Intermodulation Patents involves, *inter alia*, using a frequency selective filter (e.g., low-pass filter) that filters out

the intermodulation effects of frequencies close to the operating frequency and thereby reduces interference. For example, in a typical RFID system (such as highway tolling), readers or interrogators transmit interrogation signals at radio frequencies to transponders or tags. The tags use a detector to detect one or more of the interrogation signals and respond to the interrogator by transmitting a responsive signal. However, the interrogation signals detected by the tags may be corrupted as a result of inter-modulation interference between the desired interrogation signals and an interfering interrogation signal from one of the other readers. The Intermodulation Patents provide a filter (*e.g.*, a low pass filter) to mitigate the intermodulation effects of the signals from other readers.

39. The '532 Patent has four independent claims and eight dependent claims. Independent claims 6 and 11 and dependent claims 7-10 and 12 are directly and/or indirectly infringed by the Kapsch Defendants as discussed below. Independent claim 6 recites:

A method for receiving an interrogation signal from a reader at a first frequency, while mitigating interference effects from an interfering signal at a second frequency, the method comprising:

- (a) receiving the interrogation signal from the reader;
- (b) detecting and outputting a baseband analog signal representing the interrogation signal received by the antenna;
- (c) performing frequency-selective filtering of the baseband analog signal using a low-pass filter to output an analog signal with reduced interference; and
- (d) performing signal processing on the analog signal with the reduced interference to extract information from the analog signal with the reduced interference;

wherein the low-pass filter has a cutoff frequency which is less than a difference between the first frequency and the second frequency.

Independent claim 11 recites:

A method for providing a plurality of transponder readers in a system, the method comprising:

- (a) selecting a frequency of operation for each of the transponder readers;
- (b) providing transponders with a frequency-selective filter for reducing interference effects caused by signals from adjacent ones of the transponder readers, the frequency-selective filter being a low-pass filter selected in accordance with the frequencies of operation selected in step (a); and
- (c) installing the plurality of transponder readers in the system;

wherein the low-pass filter has a cutoff frequency which is less than a difference between the frequencies of operation selected in step (a) for adjacent ones of the readers.

40. The '977 Patent has three independent claims and four dependent claims. At least independent claim 1 and dependent claims 2 and 3 are directly and/or indirectly infringed by the Kapsch Defendants as discussed below. Independent claim 1 recites:

A transponder for receiving an interrogation signal from a reader at a first frequency and sending a response signal from the transponder at a third frequency, while mitigating interference effects from an interfering signal at a second frequency, the transponder comprising:

an antenna for receiving the interrogation signal from the reader,

a detector in communication with the antenna, said detector detecting the interrogation signal and outputting a baseband analog signal representing the interrogation signal;

a frequency-selective filter comprising a low-pass filter in communication with the detector to receive the base band analog signal output by the detector, said frequency-selective filter performing frequency-selective filtering of the baseband analog signal to output an analog signal with reduced interference; and

a signal processor in communication with the frequency selective filter to receive the analog signal with the reduced interference, said signal processor processing the analog signal with the reduced interference to extract information from the analog signal with the reduced interference;

wherein the low-pass filter has a cutoff frequency which is less than a difference between the first frequency and the second frequency.

41. The '565 Patent has three independent claims and four dependent claims. At least independent claims 1, 4, and 6 and dependent claims 2, 3, 5, and 7 are directly and/or indirectly infringed by the Kapsch Defendants as discussed below. Independent claim 1 recites:

A transponder for receiving an interrogation signal from a first reader at a first frequency and sending a response signal from the transponder at a third frequency, while mitigating interference effects from interfering signals from a plurality of second readers at least one second frequency, the transponder comprising:

an antenna for receiving the interrogation signal from the first reader and the interfering signals from the plurality of second readers;

a detector in communication with the antenna, said detector detecting the interrogation signal and outputting a baseband analog signal representing the interrogation signal;

a frequency-selective filter that reduces interference from the plurality of second readers and outputs an analog signal having a desired modulation; and

a signal processor in communication with the frequency selective filter to receive the analog signal, said signal processor processing the analog signal to extract information from the analog signal.

Independent claim 4 recites:

A transponder for receiving an interrogation signal from a first reader at a first frequency and sending a response signal from the transponder at the first frequency, while mitigating interference effects from interfering signals from a plurality of second readers at at least one second frequency, the transponder comprising:

an antenna for receiving the interrogation signal from the first reader and the interfering signals from the plurality of second readers;

a detector in communication with the antenna, said detector detecting the interrogation signal and the interfering signals and outputting a baseband analog signal representing the interrogation signal, the interfering signals, and a combination of the interrogation signal and the interfering signals;

a frequency-selective filter that receives the baseband analog signal output by the detector, reduces interference from the plurality of second readers and outputs an analog signal; and

a signal processor in communication with the frequency-selective filter to receive the analog signal output by the frequency-selective filter, said signal processor

processing the analog signal output by the frequency-selective filter to extract information from the analog signal output by the frequency-selective filter.

Independent claim 6 recites:

A transponder for receiving an interrogation signal from a first reader at a first frequency and sending a response signal from the transponder at a third frequency, while mitigating interference effects from interfering signals from a plurality of second readers at at least one second frequency, the transponder comprising:

an antenna for receiving the interrogation signal from the first reader and the interfering signals from the plurality of second readers;

a detector in communication with the antenna, said detector detecting the interrogation signal and the interfering signals and outputting a baseband analog signal representing the interrogation signal, the interfering signal, and a combination of the interrogation signal and the interfering signals;

a frequency-selective filter filtering the baseband analog signal to output an analog signal, wherein the interfering signals are reduced; and

a signal processor in communication with the frequency-selective filter to receive the analog signal output by the frequency-selective filter, said signal processor processing the analog signal with the reduced interference to extract information from the analog signal output by the frequency-selective filter.

42. The Reader Synch Patents generally describe and claim RFID interrogators and RFID interrogator systems that are configured to read transponders that use different protocols while avoiding interference between the downlink signals from the readers and the uplink signals from the transponders.

43. The '153 Patent generally describes and claims an RFID reader capable of communicating with transponders that have different power, depth of modulation, and/or duty cycles. The interrogator includes a transmitter, a receiver, and a controller and operates in an environment with at least one like interrogator to simultaneously transmit downlink signals to the transponders to enable the transponders to provide their respective uplink signals without interference between the uplink signals from the transponders and the downlink signals from the interrogators.

44. The '279 Patent generally describes and claims RFID systems that employ a synchronization technique to allow simultaneous operation of RFID readers that communicate with transponders employing different communication protocols, including IAG, EGO, SEGO, ATA, ISO, and ANSI AAR compliant transponders. The technology claimed in the '279 Patent involves, *inter alia*, an interrogation system that includes a plurality of interrogators and a synchronization signal where the interrogators are configured to operate in response to the synchronization signal to simultaneously transmit downlink signals to transponders, thereby enabling transponders to communicate uplink signals without interference between the uplink signals from the transponders and the downlink signals from the interrogators.

45. The '656 Patent generally describes and claims RFID systems that include interrogators which communicate with at least two transponders using different protocols, such as the IAG, EGO, SEGO, ATA, ISO, and/or ANSI AAR protocols. The technology claimed in the '656 Patent involves, *inter alia*, an RFID system employing an interrogator configured to communicate with at least two transponders using two different protocols in different capture zones, where at least one of the protocols has multiple commands and at least a portion of the uplink communication from each transponder does not overlap in time.

46. The '329 Patent generally describes and claims RFID systems that communicate with active transponders (such as IAG transponders) and backscatter transponders (such as EGO, SEGO, ATA, ISO, and ANSI AAR compliant transponders). The technology claimed in the '329 Patent involves, *inter alia*, an interrogation system employing at least two antennas, each covering a capture zone, where the system is configured to establish a communication signal sequence for the transponders that includes three or four sequence portions. Active transponders are read during two or three sequence portions, and at least two backscatter transponders are communicated with during the other sequence portion.

47. The '153 Patent has three independent claims and thirty-three dependent claims. At least independent claim 25 is directly and/or indirectly infringed by the Kapsch Defendants as discussed below. Independent claim 25 recites:

An interrogator capable of communicating with a first set of transponders and a second set of transponders, the first and second set of transponders having different power, depth of modulation, or duty cycles, the interrogator comprising:

A transmitter for transmitting a first downlink signal to the first set of transponders and a second downlink signal to the second set of transponders;

A receiver for receiving a first uplink signal from the first set of transponders and a second uplink signal from the second set of transponders; and,

A controller for controlling said transmitter to transmit the first and second downlink signals based on the power, depth of modulation, or duty cycle of the respective first and second sets of transponders, and for controlling said receiver to receive the first and second uplink signals based on the power, depth of modulation, or duty cycle of the respective first and second sets of transponders; Wherein the interrogator operates in an environment with at least one additional like interrogator and all of the interrogators are responsive to a synchronization signal that enables the interrogators to simultaneously transmit downlink signals to the transponders to enable the transponders to provide their respective uplink signals after the transmission of the downlink signals, thereby enabling communication between respective ones of the interrogators and transponders without interference between the uplink signals from the transponders and the downlink signals from the interrogators.

48. The '279 Patent has five independent claims and twenty-four dependent claims.

At least independent claims 1, 3, 13, 18 and 25 and dependent claims 4, 5, 14, 17, 19-24 and 26-30 are directly and/or indirectly infringed by the Kapsch Defendants as discussed below.

Independent claim 1 recites:

An interrogator system to read active RFID transponders and backscatter RFID transponders comprising

at least two transceivers,

each transceiver covering a respective capture zone, the two capture zones being in proximity to each other,

wherein said transceivers are adapted to use time division multiplexing to read the active RFID transponders in a first capture zone during a first time period, to read the active RFID transponders in a second capture zone during second time period and to simultaneously read the backscatter RFID transponders in both capture zones during a third time period, wherein a synchronization signal is shared between said transceivers, and wherein the read of the backscatter RFID transponders in the third time period by each transceiver comprises a downlink transmission,

the downlink transmission comprising plural bits, and wherein each bit of the backscatter downlink transceiver of each transceiver occurs at substantially the same time.

Independent claim 3 recites:

An interrogator system using at least a first and second protocol to read RFID transponders comprising:

at least two transceivers, each transceiver covering a respective captures zone, the respective capture zones being in proximity to each other;

and a synchronization circuit adapted to synchronize the two transceivers such that said at least two transceivers operate the first protocol simultaneously with each other during a first time period and operate the second protocol simultaneously with each other during a second time period,

wherein each of the said at least two transceivers transmits a respective downlink transmission as part of the first protocol,

each downlink transmission comprising plural bits, with the first bit of each downlink transmission of each transceiver occurring at substantially the same time.

Independent claim 13 recites:

An interrogator system for reading RFID transponders comprising:

At least two transceivers and a synchronization circuit,

Each of the at least two transceivers covering a respective capture zone and being arranged for transmitting a downlink signal in its respective capture zone, and each of the downlink signal comprising plural bits,

Wherein the respective capture zones overlap at least partially, creating an overlap capture zone in which an RFID transponder may be located, and wherein the synchronization circuit synchronizes the downlink signals from each of the two transceivers such that each bit in the downlink signals starts at substantially the same time.

Independent claim 18 recites:

An interrogation system for communicating with a plurality of transponders having different communication protocols, the interrogation system comprising:

a plurality of interrogators and

a synchronization signal,

each of the interrogators comprising

a transmitter and a receiver

the transmitters being arranged for transmitting downlink signals in accordance with different communication protocols over a downlink communications link to the transponders,

the receivers being arranged for receiving respective uplink signals over an uplink communications signal link from the transponders,

the synchronization signal being arranged for synchronizing the downlink signals for each of the plurality of interrogators, each of the interrogators operating in response to the synchronization signal to simultaneously transmit the downlink signals to the transponders to enable the transponders to provide their respective uplink signals after the transmission of the downlink signals, thereby enabling communication between respective ones of the interrogators and transponders without interference between the uplink signals from the transponders and the downlink signals from the interrogators, wherein the transponders comprise backscatter transponders.

Independent claim 25 recites:

An interrogation system for communicating with a plurality of transponders having different communication protocols, the interrogation system comprising:

a plurality of interrogators and

a synchronization signal,

each of the interrogators comprising

a transmitter and a receiver

the transmitters being arranged for transmitting downlink signals in accordance with different communication protocols over a downlink communications link to the transponders,

the receivers being arranged for receiving respective uplink signals over an uplink communications signal link from the transponders,

the synchronization signal being arranged for synchronizing the downlink signals for each of the plurality of interrogators, each of the interrogators operating in response to the synchronization signal to simultaneously transmit the downlink signals to the transponders to enable the transponders to provide their respective uplink signals after the transmission of the downlink signals, thereby enabling communication between respective ones of the interrogators and transponders without interference between the uplink signals from the transponders and the downlink signals from the interrogators,

wherein the system establishes a tag communication signal sequence, said signal sequence comprising first and second said sequence portions, said signal sequence being arranged to enable said system to read at least one active RFID transponder in a first capture zone during said first sequence portion, and to read at least one active RFID transponder in a second capture zone during said second sequence portion.

49. The '656 Patent has four independent claims and thirty dependent claims. At least independent claim 29 is directly and/or indirectly infringed by the Kapsch Defendants as discussed below. Independent claim 29 recites:

A multiprotocol RFID system comprising:

transponders using a protocol comprising at least two commands and

an interrogator system for communicating with said transponders using at least two different protocols in at least two different capture Zones, at least one of said protocols having multiple commands. Such that at least two commands are used in communicating with a transponder and at least part of the commands sent to the transponders are sent at the same time, and wherein at least a portion of an uplink portion of communications with said first transponder and a portion of an uplink portion of communications with said second transponder do not overlap in time.

50. The '329 Patent has three independent claims and seventeen dependent claims. At least independent claims 1 and 11 and dependent claims 2-5, 7, 9, 10, 12-15, 17 and 19 are directly and/or indirectly infringed by the Kapsch Defendants as discussed below. Independent claim 1 recites:

An interrogator system to read active Radio Frequency Identification (RFID) transponders and backscatter RFID transponders at a single monitoring location comprising:

at least two antennas, each antenna covering a respective capture zone at said monitoring location,

wherein said system is configured to establish a tag communication signal sequence, said signal sequence comprising first, second, third and fourth sequence portions,

said signal sequence being arranged to enable said system to:

read a first active RFID transponder during said first sequence portion,

read a second active RFID transponder during said second sequence portion, and

read a third active RFID transponder during said third sequence portion,

wherein communication with at least two backscatter RFID transponders during said fourth sequence portion via said at least two antennas overlaps in time.

Independent claim 11 recites:

An interrogator system to read active Radio Frequency Identification (RFID) transponders and backscatter RFID transponders at a single monitoring location comprising:

at least two antennas, each antenna covering a respective capture zone at said monitoring location,

wherein said system is configured to establish a tag communication signal sequence, said signal sequence comprising first, second, and third sequence portions,

wherein said signal sequence is arranged to enable said system to perform the following:

read a first active RFID transponder in a first capture zone during said first sequence portion,

read a second active RFID transponder in a second capture zone during said second sequence portion, and

communicate with at least two backscatter transponders during said third sequence portion via the at least two antennas,

wherein the communicating with each of the at least two backscatter transponders overlaps in time.

## KAPSCH'S INFRINGEMENT OF THE ASSERTED PATENTS

51. Based on information discovered through Amtech's investigation to date, at least the following products infringe one or more claims of the Asserted Patents, as discussed in more detail below:

- Readers: JANUS Multiprotocol Reader II; JANUS Reader Assembly, MPR2; JANUS Module Assembly, MRFMS 2.3; JANUS Multiprotocol RF Module Smart; JANUS IAG 3 Antenna; and JANUS Lane Kit, IAG-3 (collectively, the "Accused Readers").
- Transponders: any transponders that (a) are compliant with EPCTM Class1 Gen2 and/or ISO 18000-63 air interface protocol standard, and/or (b) include an Alien Higgs 3 ASIC, NXP G2 IM+ ASIC, and/or an ASIC with similar functionality (collectively, the "Accused Transponders"). On information and belief, these Accused Transponders include at least the following products: TRP-8611 UHF RFID Passive Headlamp Tag; TRP-8610 UHF Passive Windshield Tag; SOLANA vehicle transponder; VEKTA windshield transponder; VENUS windshield transponder; ARIES RFID headlamp transponder; PULSAR vehicle transponder; GATRIA RFID hang tag; APOLLO multi-mode tag; GEMINI multi-mode tag; ASTRIA RFID vehicle registration sticker / 3rd license plate tag; VENUS-DNA vehicle transponder; and ZERO-G cling windshield tag.
- Multiprotocol RFID Systems: systems that include and are capable of communicating with at least two transponders that use different protocols. On information and belief, these Accused Multiprotocol RFID Systems include at least systems in which the first type of transponder is one of the Accused Transponders and the second type of transponder is one of the following products:

a TDM/IAG protocol transponder (e.g., an E-ZPass®, transponder), a TDMA V6 Interior Transponder, and/or a Janus Interior Transponder.

52. Each Kapsch Defendant has had constructive notice of each Asserted Patent since at least as early as May 2017 due to Amtech's marking of its products.

53. On information and belief, each Kapsch Defendant also has had actual or constructive notice of each Asserted Patent since at least as early as May 2017, due to at least Amtech's marking of its products. On information and belief, each Kapsch Defendant knew that it infringed the Asserted Patents based on its knowledge of the same. Alternatively or additionally, each Kapsch Defendant was willfully blind to the fact that it infringed the Asserted Patents despite its knowledge of the same, based on, for example, the similarity of the Accused Products to Amtech's products. Alternatively or additionally, each Kapsch Defendant has been aware of each Asserted Patent and Amtech's allegations regarding the same since at least as early as the filing of this Complaint.

#### A. The '532 Patent

54. Kapsch infringes the '532 Patent in at least the following exemplary ways. Details regarding this infringement are found in the claim chart attached as Exhibit H, which is hereby incorporated by reference.

55. The Accused Transponders perform the methods of claims 6-10 of the '532 Patent. Installing or providing certain systems comprising the Accused Transponders requires performance of the methods of claims 11-12.

56. On information and belief, each Kapsch Defendant has directly infringed and continues to directly infringe claims 6-10 by using the Accused Transponders in the United States. Alternatively or additionally, each Kapsch Defendant directly infringes claims 6-10 by sending an interrogation signal from a reader in the presence of one or more Accused

Transponders, which causes the Accused Transponders to perform the methods of the claims in the United States. For example, on information and belief, each Kapsch Defendant performs such acts in the course of providing, installing, operating, maintaining, testing, and/or otherwise using systems that include the Accused Transponders and readers capable of interrogating those transponders. Alternatively or additionally, to the extent one or more of the recited steps are performed by one or more other Kapsch Defendant(s) or third part(ies), on information and belief, each Kapsch Defendant infringes because it directs or controls the other(s)' performance and/or it and the other(s) form a joint enterprise; in either case, for example, when it contracts with or directs related entities, system integrators, business partners, government agencies, customers or others (including users of the Accused Transponders) in the provision, installation, operation, maintenance, testing, and/or other use of systems that include the Accused Transponders and readers capable of interrogating those transponders, such as in the usual course of business when performing an ETC contract (*e.g.*, the Ohio River Bridges Project).

57. On information and belief, each Kapsch Defendant has contributorily infringed and continues to contributorily infringe claims 6-10 when it offers to sell, sells, and/or imports the Accused Transponders in the United States, knowing that they are especially made or especially adapted for performing the methods of the claims, and which are not staple articles or commodities of commerce suitable for substantial non-infringing use (*e.g.*, because they are intentionally designed to be capable of performing the methods of claims 6-10 of the '532 Patent).

58. On information and belief, the Kapsch Defendants, individually and collectively, have induced and continue to induce infringement of claims 6-10 by actively encouraging, with intent to do the same, one or more other Kapsch Defendant(s) or third part(ies) (*e.g.*, related entities, system integrators, business partners, government agencies, customers or others

(including users of the Accused Transponders)), to perform one or more of the acts described in paragraph 56 *supra*, knowing that these acts constitute infringement of the claims, and the encouragement results in one or more other Kapsch Defendant(s) or third part(ies) performing one or more of the acts of infringement. For example, the Kapsch Defendants instruct such entities in using the Accused Transponders, which use infringes.

59. On information and belief, each Kapsch Defendant has directly infringed and continues to directly infringe claims 11-12 by performing the recited steps in the United States using the Accused Transponders. For example, on information and belief, each Kapsch Defendant performs such acts in the course of providing, installing, operating, maintaining, testing, and/or otherwise using systems that include the Accused Transponders. Alternatively or additionally, to the extent one or more of the recited steps are performed by one or more other Kapsch Defendant(s) or third part(ies), on information and belief, each Kapsch Defendant infringes because it directs or controls the other(s)' performance and/or it and the other(s) form a joint enterprise; in either case, for example, when it contracts with or directs related entities, system integrators, business partners, government agencies, customers or others (including users of the Accused Transponders) in the provision, installation, operation, maintenance, testing, and/or other use of systems that include the Accused Transponders, such as in the usual course of business when performing an ETC contract (*e.g.*, the Ohio River Bridges Project).

60. On information and belief, each Kapsch Defendant has contributorily infringed and continues to contributorily infringe claims 11-12 when it offers to sell, sells, and/or imports the Accused Transponders in the United States, knowing that they are especially made or especially adapted for performing the methods of the claims, and which are not staple articles or commodities of commerce suitable for substantial non-infringing use.

61. On information and belief, the Kapsch Defendants, individually and collectively, have induced and continue to induce infringement of claims 11-12 by actively encouraging, with intent to do the same, one or more other Kapsch Defendant(s) or third part(ies) (e.g., related entities, system integrators, business partners, government agencies, customers or others (including users of the Accused Transponders)), to perform one or more of the acts described in paragraph 59 *supra*, knowing that these acts constitute infringement of the claims, and the encouragement results in one or more other Kapsch Defendant(s) or third part(ies) performing one or more of the acts. For example, the Kapsch Defendants instruct such entities in performing the recited steps using the Accused Transponders, which performance infringes.

62. On information and belief, the Kapsch Defendants engaged in each of the foregoing acts in the course of the Ohio River Bridges Project. For example, Kapsch induced the Ohio River Bridges Project Joint Board to infringe in the manner discussed.

#### **B. The '977 Patent**

63. Kapsch infringes the '977 Patent in at least the following exemplary ways. Details regarding this infringement are found in the claim chart attached as Exhibit I, which is hereby incorporated by reference.

64. On information and belief, each Kapsch Defendant has directly infringed and continues to directly infringe at least claims 1-3 by making, using, offering for sale, selling, importing, advertising, making available and/or marketing the Accused Transponders, which embody these claims, in the United States.

65. On information and belief, each Kapsch Defendant has contributorily infringed and continues to contributorily infringe at least at least claims 1-3 when it offers to sell, sells, and/or imports the Accused Transponders in the United States, knowing that they are especially made or especially adapted for use in infringing the claims, and which are not staple articles or

commodities of commerce suitable for substantial non-infringing use (*e.g.*, because they embody claims 1-3 of the '977 Patent).

66. On information and belief, the Kapsch Defendants, individually and collectively, have induced and continue to induce infringement of at least claims 1-3 by actively encouraging, with intent to do the same, one or more other Kapsch Defendant(s) or third part(ies) (*e.g.*, related entities, system integrators, business partners, government agencies, customers or others (including users of the Accused Transponders)), to perform one or more of the acts described in paragraph 64 *supra*, knowing that these acts constitute infringement of the claims, and the encouragement results in one or more other Kapsch Defendant(s) or third part(ies) performing one or more of the acts of infringement. For example, the Kapsch Defendants instruct such entities in using the Accused Transponders, which use infringes.

67. On information and belief, the Kapsch Defendants engaged in each of the foregoing acts in the course of the Ohio River Bridges Project. For example, Kapsch induced the Ohio River Bridges Project Joint Board to infringe in the manner discussed.

### C. The '565 Patent

68. Kapsch infringes the '565 Patent in at least the following exemplary ways. Details regarding this infringement are found in the claim chart attached as Exhibit J, which is hereby incorporated by reference.

69. On information and belief, each Kapsch Defendant has directly infringed and continues to directly infringe at least claims 1-7 by making, using, offering for sale, selling, importing, advertising, making available and/or marketing the Accused Transponders, which embody these claims, in the United States.

70. On information and belief, each Kapsch Defendant has contributorily infringed and continues to contributorily infringe at least at least claims 1-7 when it offers to sell, sells,

and/or imports the Accused Transponders in the United States, knowing as discussed that they are especially made or especially adapted for use in infringing the claims, and which are not staple articles or commodities of commerce suitable for substantial non-infringing use (*e.g.*, because they embody claims 1-7 of the '565 Patent).

71. On information and belief, the Kapsch Defendants, individually and collectively, have induced and continue to induce infringement of at least claims 1-7 by actively encouraging, with intent to do the same, one or more other Kapsch Defendant(s) or third part(ies) (*e.g.*, related entities, system integrators, business partners, government agencies, customers or others (including users of the Accused Transponders)), to perform one or more of the acts described in paragraph 69 *supra*, knowing that these acts constitute infringement of the claims, and the encouragement results in one or more other Kapsch Defendant(s) or third part(ies) performing one or more of the acts of infringement. For example, the Kapsch Defendants instruct such entities in using the Accused Transponders, which use infringes.

72. On information and belief, the Kapsch Defendants engaged in each of the foregoing acts in the course of the Ohio River Bridges Project. For example, Kapsch induced the Ohio River Bridges Project Joint Board to infringe in the manner discussed.

#### **D. The '153 Patent**

73. Kapsch infringes the '153 Patent in at least the following exemplary ways. Details regarding this infringement are found in the claim chart attached as Exhibit K, which is hereby incorporated by reference.

74. On information and belief, each Kapsch Defendant has directly infringed and continues to directly infringe at least claim 25 by making, using, offering for sale, selling, importing, advertising, making available and/or marketing the Accused Readers and/or bundles or systems including the Accused Readers (*e.g.*, "Lane Kits"), which embody these claims, in the

United States.

75. On information and belief, each Kapsch Defendant has contributorily infringed and continues to contributorily infringe at least claim 25 when it offers to sell, sells, and/or imports the Accused Readers in the United States, knowing that they are especially made or especially adapted for use in infringing the claims, and which are not staple articles or commodities of commerce suitable for substantial non-infringing use (*e.g.*, because they embody claim 25 of the '153 Patent).

76. On information and belief, the Kapsch Defendants, individually and collectively, have induced and continue to induce infringement of at least claim 25 by actively encouraging, with intent to do the same, one or more other Kapsch Defendant(s) or third part(ies) (*e.g.*, related entities, system integrators, business partners, government agencies, customers or others (including users of the Accused Readers)), to perform one or more of the acts described in paragraph 74 *supra*, knowing that these acts constitute infringement of the claims, and the encouragement results in one or more other Kapsch Defendant(s) or third part(ies) performing one or more of the acts of infringement. For example, the Kapsch Defendants instruct such entities in using the Accused Readers and/or bundles or systems including the Accused Readers (*e.g.*, "Lane Kits"), which use infringes.

77. On information and belief, the Kapsch Defendants engaged in each of the foregoing acts in the course of the Ohio River Bridges Project. For example, Kapsch induced the Ohio River Bridges Project Joint Board to infringe in the manner discussed.

#### **E. The '279 Patent**

78. Kapsch infringes the '279 Patent in at least the following exemplary ways. Details regarding this infringement are found in the claim chart attached as Exhibit L, which is hereby incorporated by reference.

79. On information and belief, each Kapsch Defendant has directly infringed and continues to directly infringe at least claims 1, 3-5, 13-14, and 17-30 by making, using, offering for sale, selling, importing, advertising, making available and/or marketing the Accused Readers and/or bundles or systems including the Accused Readers (*e.g.*, “Lane Kits”), which embody these claims, in the United States.

80. On information and belief, each Kapsch Defendant has contributorily infringed and continues to contributorily infringe at least claims 1, 3-5, 13-14, and 17-30 when it offers to sell, sells, and/or imports the Accused Readers in the United States, knowing as discussed that they are especially made or especially adapted for use in infringing the claims, and which are not staple articles or commodities of commerce suitable for substantial non-infringing use (*e.g.*, because they embody claims 1, 3-5, 13-14, and 17-30 of the ’279 Patent).

81. On information and belief, the Kapsch Defendants, individually and collectively, have induced and continue to induce infringement of at least claims 1, 3-5, 13-14, and 17-30 by actively encouraging, with intent to do the same, one or more other Kapsch Defendant(s) or third part(ies) (*e.g.*, related entities, system integrators, business partners, government agencies, customers or others (including users of the Accused Readers)), to perform one or more of the acts described in paragraph 79 *supra*, knowing that these acts constitute infringement of the claims, and the encouragement results in one or more other Kapsch Defendant(s) or third part(ies) performing one or more of the acts of infringement. For example, the Kapsch Defendants instruct such entities in using the Accused Readers and/or bundles or systems including the Accused Readers (*e.g.*, “Lane Kits”), which use infringes.

82. On information and belief, the Kapsch Defendants engaged in each of the foregoing acts in the course of the Ohio River Bridges Project. For example, Kapsch induced the Ohio River Bridges Project Joint Board to infringe in the manner discussed.

**F. The '656 Patent**

83. Kapsch infringes the '656 Patent in at least the following exemplary ways. Details regarding this infringement are found in the claim chart attached as Exhibit M, which is hereby incorporated by reference.

84. On information and belief, each Kapsch Defendant has directly infringed and continues to directly infringe at least claim 29 by making, using, offering for sale, selling, importing, advertising, making available and/or marketing the Accused Multiprotocol RFID Systems, which embody these claims, in the United States.

85. On information and belief, each Kapsch Defendant has contributorily infringed and continues to contributorily infringe at least claim 29 when it offers to sell, sells, and/or imports the Accused Multiprotocol RFID Systems and/or components of the Accused Multiprotocol RFID Systems including Accused Readers, in the United States, knowing that they are especially made or especially adapted for use in infringing the claims, and which are not staple articles or commodities of commerce suitable for substantial non-infringing use (*e.g.*, because they embody claim 29 of the '656 Patent).

86. On information and belief, the Kapsch Defendants, individually and collectively, have induced and continue to induce infringement of at least claim 29 by actively encouraging, with intent to do the same, one or more other Kapsch Defendant(s) or third part(ies) (*e.g.*, related entities, system integrators, business partners, government agencies, customers or others (including users of the Accused Multiprotocol RFID Systems)), to perform one or more of the acts described in paragraph 84 *supra*, knowing that these acts constitute infringement of the claims, and the encouragement results in one or more other Kapsch Defendant(s) or third part(ies) performing one or more of the acts of infringement. For example, the Kapsch Defendants instruct such entities in using the Accused MultiProtocol RFID Systems, which use

infringes.

87. On information and belief, the Kapsch Defendants engaged in each of the foregoing acts in the course of the Ohio River Bridges Project. For example, Kapsch induced the Ohio River Bridges Project Joint Board to infringe in the manner discussed.

#### **G. The '329 Patent**

88. Kapsch infringes the '329 Patent in at least the following exemplary ways. Details regarding this infringement are found in the claim chart attached as Exhibit N, which is hereby incorporated by reference.

89. On information and belief, each Kapsch Defendant has directly infringed and continues to directly infringe at least claims 1-5, 7, 9-15, 17, and 19 by making, using, offering for sale, selling, importing, advertising, making available and/or marketing the Accused Readers and/or bundles or systems including the Accused Readers (*e.g.*, “Lane Kits”), which embody these claims, in the United States.

90. On information and belief, each Kapsch Defendant has contributorily infringed and continues to contributorily infringe at least claims 1-5, 7, 9-15, 17, and 19 when it offers to sell, sells, and/or imports the Accused Readers in the United States, knowing that they are especially made or especially adapted for use in infringing the claims, and which are not staple articles or commodities of commerce suitable for substantial non-infringing use (*e.g.*, because they embody claims 1-5, 7, 9-15, 17, and 19 of the '329 Patent).

91. On information and belief, the Kapsch Defendants, individually and collectively, have induced and continue to induce infringement of at least claims 1-5, 7, 9-15, 17, and 19 by actively encouraging, with intent to do the same, one or more other Kapsch Defendant(s) or third part(ies) (*e.g.*, related entities, system integrators, business partners, government agencies, customers or others (including users of the Accused Readers)), to perform one or more of the

acts described in paragraph 89 *supra*, knowing that these acts constitute infringement of the claims, and the encouragement results in one or more other Kapsch Defendant(s) or third part(ies) performing one or more of the acts of infringement. For example, the Kapsch Defendants instruct such entities in using the Accused Readers and/or bundles or systems including the Accused Readers (*e.g.*, “Lane Kits”), which use infringes.

92. On information and belief, the Kapsch Defendants engaged in each of the foregoing acts in the course of the Ohio River Bridges Project. For example, Kapsch induced the Ohio River Bridges Project Joint Board to infringe in the manner discussed.

#### **COUNT I: KAPSCH’S INFRINGEMENT OF THE ’532 PATENT**

93. Amtech realleges and incorporates by reference paragraphs 1-92 above, as if fully set forth herein.

94. The ’532 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

95. By making, using, offering for sale, selling, importing, advertising, making available and/or marketing infringing products and services, Kapsch infringed, contributorily infringed, and induced infringement of, and will continue to infringe, contributorily infringe, and induce infringement, literally and/or under the doctrine of equivalents, of claims 6-12 of the ’532 Patent under one or more of 35 U.S.C. § 271(a), (b), (c), and (f).

96. As stated above, each Kapsch Defendant has had constructive and actual notice of each Asserted Patent since at least as early as May 2017 due to Amtech’s marking of its products. In addition, each Kapsch Defendant knew and/or was willfully blind to the fact that it infringed the Asserted Patents based on its knowledge of the same and, for example, the similarity of the Accused Products to Amtech’s products. Alternatively or additionally, each Kapsch Defendant has been aware of each Asserted Patent and Amtech’s allegations regarding

the same since at least as early as the filing of this Complaint. Despite Kapsch's notice and awareness of the '532 Patent and/or Amtech's allegations regarding the same, it has infringed, and continues to infringe, the '532 Patent. Kapsch's infringement is therefore willful.

97. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '532 Patent, Amtech has been, is being, and, unless such acts and practices are enjoined by the Court, will continue to be injured in its business and property rights.

98. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '532 Patent, Amtech has suffered, is suffering, and unless such acts and practices are enjoined by the Court, will continue to suffer injury and damages, for which it is entitled to relief under 35 U.S.C. § 284 in an amount to be determined at trial.

99. By reason of the acts and practices of Kapsch as described herein, it has also caused, is causing, and, unless such acts and practices are enjoined by the Court, will continue to cause immediate and irreparable harm to Amtech for which there is no adequate remedy at law and for which Amtech is entitled to injunctive relief under 35 U.S.C. § 283.

## **COUNT II: KAPSCH'S INFRINGEMENT OF THE '977 PATENT**

100. Amtech realleges and incorporates by reference paragraphs 1-99 above, as if fully set forth herein.

101. The '977 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

102. By making, using, offering for sale, selling, importing, advertising, making available and/or marketing infringing products and services, Kapsch infringed, contributorily infringed, and induced infringement of, and will continue to infringe, contributorily infringe, and induce infringement, literally and/or under the doctrine of equivalents, of at least claims 1-3 of

the '977 Patent under one or more of 35 U.S.C. § 271(a), (b), (c), and (f).

103. As stated above, each Kapsch Defendant has had constructive and actual notice of each Asserted Patent since at least as early as May 2017 due to Amtech's marking of its products. In addition, each Kapsch Defendant knew and/or was willfully blind to the fact that it infringed the Asserted Patents based on its knowledge of the same and, for example, the similarity of the Accused Products to Amtech's products. Alternatively or additionally, each Kapsch Defendant has been aware of each Asserted Patent and Amtech's allegations regarding the same since at least as early as the filing of this Complaint. Despite Kapsch's notice and awareness of the '977 Patent and/or Amtech's allegations regarding the same, it has infringed, and continues to infringe, the '977 Patent. Kapsch's infringement is therefore willful.

104. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '977 Patent, Amtech has been, is being, and, unless such acts and practices are enjoined by the Court, will continue to be injured in its business and property rights.

105. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '977 Patent, Amtech has suffered, is suffering, and unless such acts and practices are enjoined by the Court, will continue to suffer injury and damages, for which it is entitled to relief under 35 U.S.C. § 284 in an amount to be determined at trial.

106. By reason of the acts and practices of Kapsch as described herein, it has also caused, is causing, and, unless such acts and practices are enjoined by the Court, will continue to cause immediate and irreparable harm to Amtech for which there is no adequate remedy at law and for which Amtech is entitled to injunctive relief under 35 U.S.C. § 283.

**COUNT III: KAPSCH'S INFRINGEMENT OF THE '565 PATENT**

107. Amtech realleges and incorporates by reference paragraphs 1-106 above, as if fully set forth herein.

108. The '565 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

109. By making, using, offering for sale, selling, importing, advertising, making available and/or marketing infringing products and services, Kapsch infringed, contributorily infringed, and induced infringement of, and will continue to infringe, contributorily infringe, and induce infringement, literally and/or under the doctrine of equivalents, of at least claims 1-7 of the '565 Patent under one or more of 35 U.S.C. § 271(a), (b), (c), and (f).

110. As stated above, each Kapsch Defendant has had constructive and actual notice of each Asserted Patent since at least as early as May 2017 due to Amtech's marking of its products. In addition, each Kapsch Defendant knew and/or was willfully blind to the fact that it infringed the Asserted Patents based on its knowledge of the same and, for example, the similarity of the Accused Products to Amtech's products. Alternatively or additionally, each Kapsch Defendant has been aware of each Asserted Patent and Amtech's allegations regarding the same since at least as early as the filing of this Complaint. Despite Kapsch's notice and awareness of the '565 Patent and/or Amtech's allegations regarding the same, it has infringed, and continues to infringe, the '565 Patent. Kapsch's infringement is therefore willful.

111. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '565 Patent, Amtech has been, is being, and, unless such acts and practices are enjoined by the Court, will continue to be injured in its business and property rights.

112. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '565 Patent, Amtech has suffered, is suffering, and unless such acts and practices are enjoined by the Court, will continue to suffer injury and damages, for which it is entitled to relief under 35 U.S.C. § 284 in an amount to be determined at trial.

113. By reason of the acts and practices of Kapsch as described herein, it has also caused, is causing, and, unless such acts and practices are enjoined by the Court, will continue to cause immediate and irreparable harm to Amtech for which there is no adequate remedy at law and for which Amtech is entitled to injunctive relief under 35 U.S.C. § 283.

#### **COUNT IV: KAPSCH'S INFRINGEMENT OF THE '153 PATENT**

114. Amtech realleges and incorporates by reference paragraphs 1-113 above, as if fully set forth herein.

115. The '153 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

116. By making, using, offering for sale, selling, importing, advertising, making available and/or marketing infringing products and services, Kapsch infringed, contributorily infringed, and induced infringement of, and will continue to infringe, contributorily infringe, and induce infringement, literally and/or under the doctrine of equivalents, of at least claim 25 of the '153 Patent under one or more of 35 U.S.C. § 271(a), (b), (c), and (f).

117. As stated above, each Kapsch Defendant has had constructive and actual notice of each Asserted Patent since at least as early as May 2017 due to Amtech's marking of its products, and each Kapsch Defendant knew and/or was willfully blind to the fact that it infringed the Asserted Patents based on its knowledge of the same and, for example, the similarity of the Accused Products to Amtech's products. Alternatively or additionally, each Kapsch Defendant has been aware of each Asserted Patent and Amtech's allegations regarding the same since at

least as early as the filing of this Complaint. Despite Kapsch's notice and awareness of the '153 Patent and/or Amtech's allegations regarding the same, it has infringed, and continues to infringe, the '153 Patent. Kapsch's infringement is therefore willful.

118. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '153 Patent, Amtech has been, is being, and, unless such acts and practices are enjoined by the Court, will continue to be injured in its business and property rights.

119. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '153 Patent, Amtech has suffered, is suffering, and unless such acts and practices are enjoined by the Court, will continue to suffer injury and damages, for which it is entitled to relief under 35 U.S.C. § 284 in an amount to be determined at trial.

120. By reason of the acts and practices of Kapsch, it has also caused, is causing, and, unless such acts and practices are enjoined by the Court, will continue to cause immediate and irreparable harm to Amtech for which there is no adequate remedy at law and for which Amtech is entitled to injunctive relief under 35 U.S.C. § 283.

#### **COUNT V: KAPSCH'S INFRINGEMENT OF THE '279 PATENT**

121. Amtech realleges and incorporates by reference paragraphs 1-120 above, as if fully set forth herein.

122. The '279 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

123. By making, using, offering for sale, selling, importing, advertising, making available and/or marketing infringing products and services, Kapsch infringed, contributorily infringed, and induced infringement of, and will continue to infringe, contributorily infringe, and induce infringement, literally and/or under the doctrine of equivalents, of at least claims 1, 3-5,

13-14, and 17-30 of the '279 Patent under one or more of 35 U.S.C. § 271(a), (b), (c), and (f).

124. As stated above, each Kapsch Defendant has had constructive and actual notice of each Asserted Patent since at least as early as May 2017 due to Amtech's marking of its products. In addition, each Kapsch Defendant knew and/or was willfully blind to the fact that it infringed the Asserted Patents based on its knowledge of the same and, for example, the similarity of the Accused Products to Amtech's products. Alternatively or additionally, each Kapsch Defendant has been aware of each Asserted Patent and Amtech's allegations regarding the same since at least as early as the filing of this Complaint. Despite Kapsch's notice and awareness of the '279 Patent and/or Amtech's allegations regarding the same, it has infringed, and continues to infringe, the '279 Patent. Kapsch's infringement is therefore willful.

125. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '279 Patent, Amtech has been, is being, and, unless such acts and practices are enjoined by the Court, will continue to be injured in its business and property rights.

126. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '279 Patent, Amtech has suffered, is suffering, and unless such acts and practices are enjoined by the Court, will continue to suffer injury and damages, for which it is entitled to relief under 35 U.S.C. § 284 in an amount to be determined at trial.

127. By reason of the acts and practices of Kapsch as described herein, it has also caused, is causing, and, unless such acts and practices are enjoined by the Court, will continue to cause immediate and irreparable harm to Amtech for which there is no adequate remedy at law and for which Amtech is entitled to injunctive relief under 35 U.S.C. § 283.

**COUNT VI: KAPSCH'S INFRINGEMENT OF THE '656 PATENT**

128. Amtech realleges and incorporates by reference paragraphs 1-127 above, as if fully set forth herein.

129. The '656 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

130. By making, using, offering for sale, selling, importing, advertising, making available and/or marketing infringing products and services, Kapsch infringed, contributorily infringed, and induced infringement of, and will continue to infringe, contributorily infringe, and induce infringement, literally and/or under the doctrine of equivalents, of at least claim 29 of the '656 Patent under one or more of 35 U.S.C. § 271(a), (b), (c), and (f).

131. As stated above, each Kapsch Defendant has had constructive and actual notice of each Asserted Patent since at least as early as May 2017 due to Amtech's marking of its products. In addition, each Kapsch Defendant knew and/or was willfully blind to the fact that it infringed the Asserted Patents based on its knowledge of the same and, for example, the similarity of the Accused Products to Amtech's products. Alternatively or additionally, each Kapsch Defendant has been aware of each Asserted Patent and Amtech's allegations regarding the same since at least as early as the filing of this Complaint. Despite Kapsch's notice and awareness of the '656 Patent and/or Amtech's allegations regarding the same, it has infringed, and continues to infringe, the '656 Patent. Kapsch's infringement is therefore willful.

132. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '656 Patent, Amtech has been, is being, and, unless such acts and practices are enjoined by the Court, will continue to be injured in its business and property rights.

133. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '656 Patent, Amtech has suffered, is suffering, and unless such acts and practices are enjoined by the Court, will continue to suffer injury and damages, for which it is entitled to relief under 35 U.S.C. § 284 in an amount to be determined at trial.

134. By reason of the acts and practices of Kapsch as described herein, it has also caused, is causing, and, unless such acts and practices are enjoined by the Court, will continue to cause immediate and irreparable harm to Amtech for which there is no adequate remedy at law and for which Amtech is entitled to injunctive relief under 35 U.S.C. § 283.

#### **COUNT VII: KAPSCH'S INFRINGEMENT OF THE '329 PATENT**

135. Amtech realleges and incorporates by reference paragraphs 1-134 above, as if fully set forth herein.

136. The '329 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

137. By making, using, offering for sale, selling, importing, advertising, making available and/or marketing infringing products and services, Kapsch infringed, contributorily infringed, and induced infringement of, and will continue to infringe, contributorily infringe, and induce infringement, literally and/or under the doctrine of equivalents, of at least claims 1-5, 7, 9-15, 17, and 19 of the '329 Patent under one or more of 35 U.S.C. § 271(a), (b), (c), and (f).

138. As stated above, each Kapsch Defendant has had constructive and actual notice of each Asserted Patent since at least as early as May 2017 due to Amtech's marking of its products. In addition, each Kapsch Defendant knew and/or was willfully blind to the fact that it infringed the Asserted Patents based on its knowledge of the same and, for example, the similarity of the Accused Products to Amtech's products. Alternatively or additionally, each Kapsch Defendant has been aware of each Asserted Patent and Amtech's allegations regarding

the same since at least as early as the filing of this Complaint. Despite Kapsch's notice and awareness of the '329 Patent and/or Amtech's allegations regarding the same, it has infringed, and continues to infringe, the '329 Patent. Kapsch's infringement is therefore willful.

139. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '329 Patent, Amtech has been, is being, and, unless such acts and practices are enjoined by the Court, will continue to be injured in its business and property rights.

140. As a direct and proximate consequence of the acts and practices of Kapsch in infringing one or more claims of the '329 Patent, Amtech has suffered, is suffering, and unless such acts and practices are enjoined by the Court, will continue to suffer injury and damages, for which it is entitled to relief under 35 U.S.C. § 284 in an amount to be determined at trial.

141. By reason of the acts and practices of Kapsch as described herein, it has also caused, is causing, and, unless such acts and practices are enjoined by the Court, will continue to cause immediate and irreparable harm to Amtech for which there is no adequate remedy at law and for which Amtech is entitled to injunctive relief under 35 U.S.C. § 283.

#### **PRAYER FOR RELIEF**

WHEREFORE, Amtech prays for the entry of a judgment from this Court:

- (a) Declaring that Kapsch has directly infringed, contributorily infringed, and induced infringement of the Asserted Patents under 35 U.S.C. § 271 *et al.*;
- (b) Awarding Amtech damages for Kapsch's infringement of the Asserted Patents, together with interest;
- (c) Declaring that Kapsch's infringement of the Asserted Patents has been and is willful;

- (d) Awarding Amtech multiple damages including treble damages under 35 U.S.C. § 284 for willful infringement of the Asserted Patents;
- (e) Declaring this to be an “exceptional case” within the meaning of 35 U.S.C. § 285, entitling Amtech to an award of its reasonable attorney fees, expenses and costs in this action;
- (f) Preliminarily and permanently enjoining Kapsch from further infringement of the Asserted Patents; and
- (g) Awarding Amtech such other and further relief as this Court may deem to be just and proper.

**JURY TRIAL DEMAND**

Amtech demands a trial by jury on all issues so triable.

DATED: November 12, 2020

Respectfully submitted,

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\* *pro hac vice* to be filed